Listing of Claims

1. (Previously presented) A method of inhibiting angiogenesis in a human patient in need of such treatment comprising administering to the patient an effective amount of a nucleic acid expressing the human MDA-7 polypeptide in eukaryotic cells to inhibit angiogenesis.

2. (Original) The method of claim 1, wherein said patient exhibits an angiogenesis-related disease.

3. (Original) The method of claim 2, wherein the angiogenesis-related disease is further defined as angiogenesis-dependent cancer, a benign tumor, rheumatoid arthritis, psoriasis, an ocular angiogenic disease, Osler-Webber Syndrome, myocardial angiogenesis, plaque neovascularization, a telangiectasia, hemophiliac joint, angiofibroma, wound granulation, cat scratch disease, an ulcer, an intestinal adhesion, atherosclerosis, scleroderma, or a hypertrophic scar.

4. (Original) The method of claim 3, wherein angiogenesis-dependent cancer is further defined as a solid tumor, leukemia, or a tumor metastasis.

5. (Withdrawn) The method of claim 3, wherein the benign tumor is further defined as a hemangioma, a neuroma, a neurofibroma, a trachoma, uterine fibroid, hamartoma, teratoma, or a pyogenic granuloma.

6. (Withdrawn) The method of claim 3, wherein the ocular angiogenic disease is further defined as diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, or Rubeosis.

7. (Original) The method of claim 1, wherein the nucleic acid is an expression vector.

8. (Original) The method of claim 7, wherein the expression vector is a viral vector.

9. (Presently amended) The method of claim 8, wherein between 10^3 and 10^{13} pfu of the viral vector is administered ~~at between 10^3 and 10^{13} pfu~~.

10. (Original) The method of claim 8, wherein said viral vector is an adenoviral vector, a retroviral vector, a vaccinia viral vector, an adeno-associated viral vector, a polyoma viral vector, or a herpesviral vector.

11. (Original) The method of claim 8, wherein said viral vector is an adenoviral vector.

12. (Original) The method of claim 1, wherein said nucleic acid further comprises a CMV IE, dectin-1, dectin-2, human CD11c, F4/80, SM22 or MHC class II promoter.

13. (Original) The method of claim 1, wherein the MDA-7 polypeptide or nucleic acid is administered to the patient by direct injection into an area in need of inhibition of angiogenesis.

14. (Original) The method of claim 13, wherein the patient is administered multiple injections.

15. (Presently amended) The method of claim 13 [1], wherein the injection is performed locally to a disease site.

16. (Presently amended) The method of claim 13 [1], wherein the injection is performed regionally to a disease site.

17. (Previously presented) The method of claim 1, wherein the injection is performed distally to a disease site.

18. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by continuous infusion.

19. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by intravenous injection.

20. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered prior to or after surgery.

21. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered before chemotherapy, immunotherapy, or radiotherapy.

22. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered during chemotherapy, immunotherapy, or radiotherapy.

23. (Original) The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered after chemotherapy, immunotherapy, or radiotherapy.

24. (Original) The method of claim 1, wherein the patient is a human.

25. (Original) The method of claim 1, wherein the MDA polypeptide comprises amino acids from 1 to 206 of SEQ ID NO:2.

26.-31. (Cancelled)

32. (Original) The method of claim 1, wherein the MDA polypeptide comprises amino acids from 182 to 206 of SEQ ID NO:2.

33. (Original) The method of claim 1, wherein the MDA polypeptide comprises a secretory signal.

34. (Original) The method of claim 33, wherein the secretory signal is further defined as a positively charged N-terminal region in combination with a hydrophobic core.

35. (Original) The method of claim 1, wherein the patient is a cancer patient.

36. (Previously presented) A method of inhibiting endothelial cell differentiation in a human patient comprising administering to the patient an effective amount of a nucleic acid molecule expressing the human MDA-7 polypeptide.

37. (Previously presented) The method of claim 36, wherein a chemotherapeutic agent is administered prior to administration of the nucleic acid molecule.

38. (Original) The method of claim 36 wherein a chemotherapeutic agent is administered after administration of the MDA-7 polypeptide or the nucleic acid molecule.

39. (Previously presented) The method of claim 37 or 38, wherein the chemotherapeutic agent is a DNA damaging agent.

40. (Original) The method of claim 39, wherein the DNA damaging agent is gamma-irradiation, X-rays, UV-irradiation, microwaves, electronic emissions, adriamycin, 5-fluorouracil (5FU), etoposide (VP-16), camptothecin, actinomycin-D, mitomycin C, cisplatin (CDDP), or hydrogen peroxide.

41. (Original) The method of claim 38, wherein the chemotherapeutic agent is a cisplatin (CDDP), carboplatin, procarbazine, mechlorethamine, cyclophosphamide, camptothecin, ifosfamide, melphalan, chlorambucil, bisulfan, nitrosurea, dactinomycin, daunorubicin, doxorubicin, bleomycin, plicomycin, mitomycin, etoposide (VP16), tamoxifen, taxol, transplatinum, 5-fluorouracil, vincristin, vinblastin, methotrexate, or analog or derivative variant thereof.

42. (Original) The method of claim 36, wherein the nucleic acid is comprised within a viral vector.

43. (Original) The method of claim 36, wherein the nucleic acid is comprised in a lipid composition.

68. (Withdrawn) The method of claim 32, wherein the MDA polypeptide comprises amino acids from 175 to 206 of SEQ ID NO:2.

69. (Withdrawn) The method of claim 68, wherein the MDA polypeptide comprises amino acids from 150 to 206 of SEQ ID NO:2.

70. (Withdrawn) The method of claim 69, wherein the MDA polypeptide comprises amino acids from 125 to 206 of SEQ ID NO:2.

71. (Withdrawn) The method of claim 70, wherein the MDA polypeptide comprises amino acids from about 100 to about 206 of SEQ ID NO:2.

72. (Withdrawn) The method of claim 71, wherein the MDA polypeptide comprises amino acids from 75 to 206 of SEQ ID NO:1.

73. (Withdrawn) The method of claim 72, wherein the MDA polypeptide comprises amino acids from 49 to 206 of SEQ ID NO:2.

74. (Withdrawn) The method of claim 73, wherein the MDA polypeptide comprises amino acids from 1 to 206 of SEQ ID NO:2.

75. (Previously presented) The method of claim 8, wherein 10^{10} to 10^{13} viral particles are administered.

76. (Previously presented) The method of claim 75, wherein 10^{11} to 10^{12} viral particles are administered.

77. (Previously presented) The method of claim 3, wherein the angiogenesis-dependent cancer is a hepatocarcinoma, retinoblastoma, astrocytoma, leukemia, neuroblastoma, mesothelioma, or non-small cell lung, small-cell lung, lung, head, neck, pancreatic, prostate, renal, bone, testicular, ovarian, cervical, gastrointestinal, lymphoma, brain, colon or bladder cancer.